This controlled explosion was carried out by HSL on the Buxton site as part of the investigation into the Ladbroke Grove rail accident, which occurred on 5th October 1999. The collision occurred at a closing speed of some 230km/hr and resulted in thirty one people losing their lives. An unusual feature of the crash was the major fire which ensued, and HSL’s investigation team established that about 6 tonnes of diesel had been explosively released during the accident, when it was atomised and subsequently ignited by the electric power lines. The picture shows a crashworthiness test where a fuel tank was impacted by a vehicle carriage down the impact tract at HSL, and the resultant atomisation of the diesel resulted in a large fireball when it came in contact with an ignition source. Therefore, the likely failure mode of the tanks was demonstrated and related to information obtained from the crash site at the initial impact point of the two locomotives.